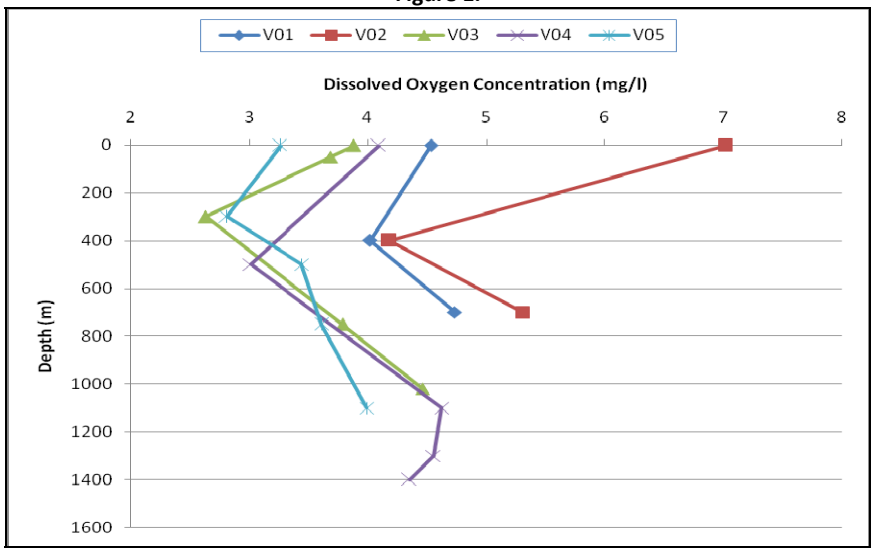
Dissolved oxygen measurement using the Extech DO700 hand held probe aboard the RV Ocean Veritas May 29, 2010

The RV Ocean Veritas occupied four stations on May 27, 2010 and three stations on May 28, 2010. Two methods were employed to measure dissolved oxygen:

1. SBE Dissolved Oxygen sensor on a CTD package
2. Extech DO700 hand held probe

SBE dissolved oxygen (DO) profiles were collected at stations V01-V08. Hand held measurements of dissolved oxygen using the Extech DO700 probe were made on all discrete samples collected from casts deployed at stations V01-V05. A comparison of the DO results from the Extech DO700 probe on May 27 and May 28, 2010 is presented in Figure 1. Figure 1 is a comparison of dissolved oxygen measurements taken at each station presented with depth the measurements were made. The final depth represents approximately 30 m above the bottom.

Figure 1.



The results from the Extech hand-held probe indicate that there is between 3 mg/l and 7 mg/l of oxygen at 2 meters below the surface. There are oxygen minima at all stations between 200 and 600 meters ranging from 2.63 mg/l at station V03; to 4.18 mg/l at station V02. At each station, oxygen concentration increased steadily from the respective mid depth oxygen minima. The highest concentration measured by the Extech probe was at 2m depth at station V02 (7.01 mg/l). The lowest concentration measured by the Extech hand held probe was at 300 m at station V03.